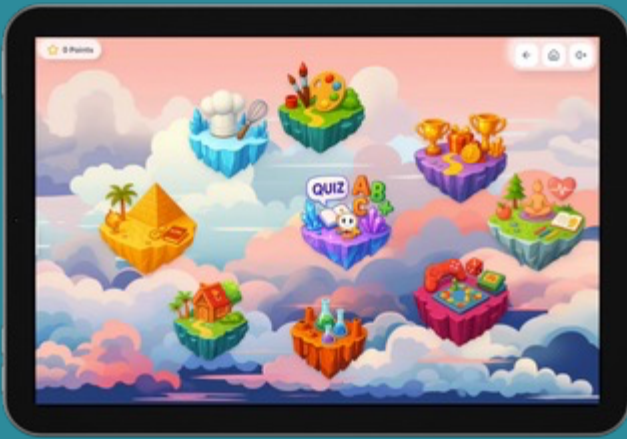


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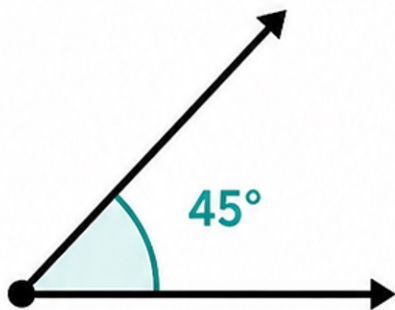
Angles - Year 5

Table of Contents
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Worksheet: Missing Angles
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Worksheet: Angle Code Message
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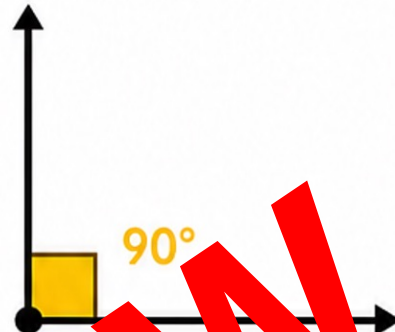
Angle Names

Acute: less than 90°



An acute angle is less than 90 degrees.

Right: exactly 90°



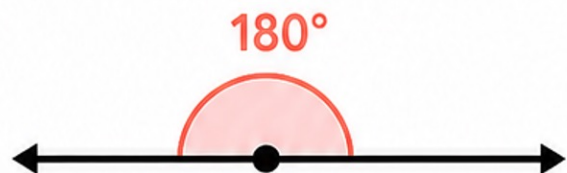
A right angle is exactly 90 degrees.

Obtuse: greater than 90° and less than 180°



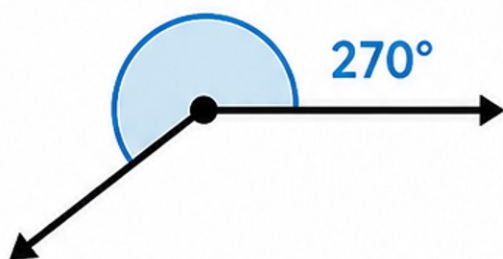
An obtuse angle is greater than 90 degrees and less than 180 degrees.

Straight: exactly 180°



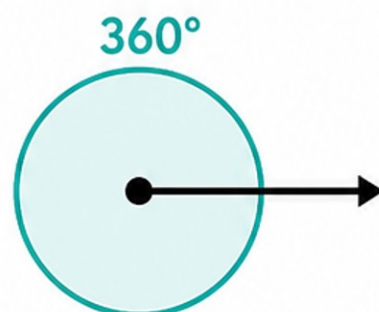
A straight angle is exactly 180 degrees.

Reflex: greater than 180° and less than 360°



A reflex angle is greater than 180 degrees and less than 360 degrees.

Full turn: exactly 360°



A full turn is exactly 360 degrees.



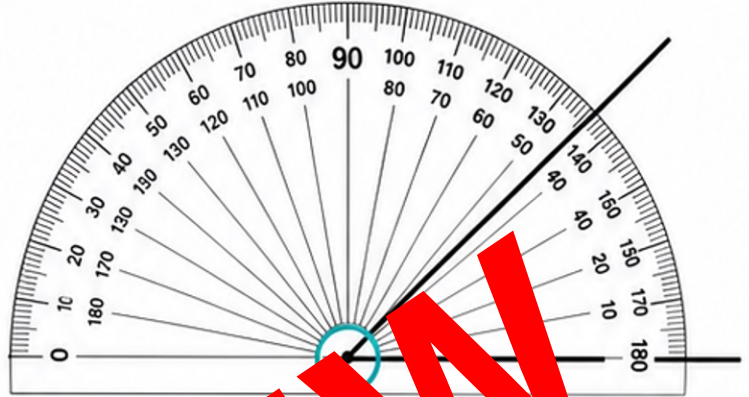
Use a Protractor



1.

Line up the centre mark

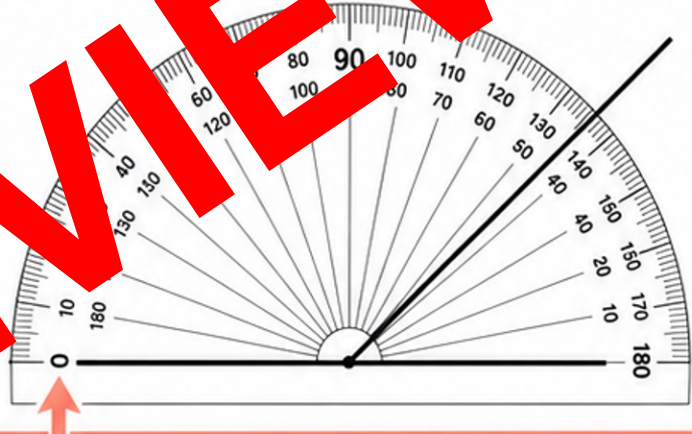
Place the centre mark on the vertex.



2.

Match the baseline

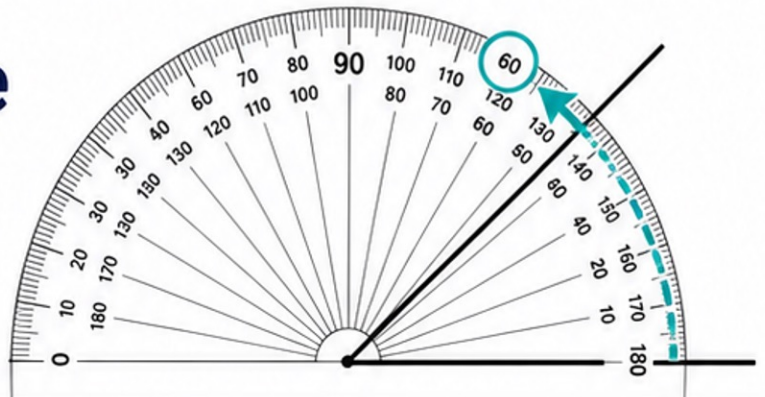
Line up one arm with the 0° mark.



3.

Read the scale

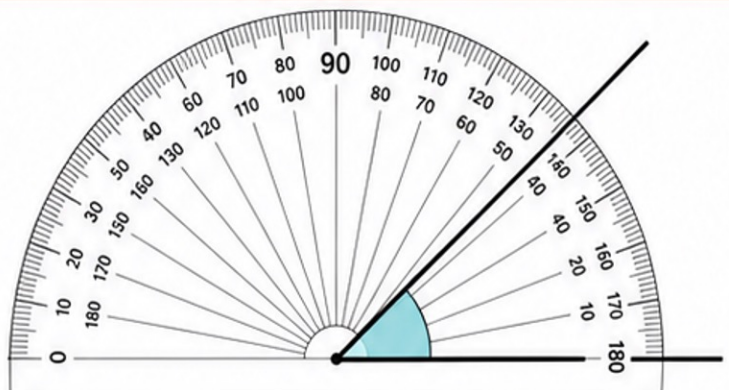
Follow the other arm to find the angle.



4.

Check the angle name

Compare the size with 90° , 180° and 360° .



Angle Sort

Measure or estimate each angle, then place it in the matching box.

Acute

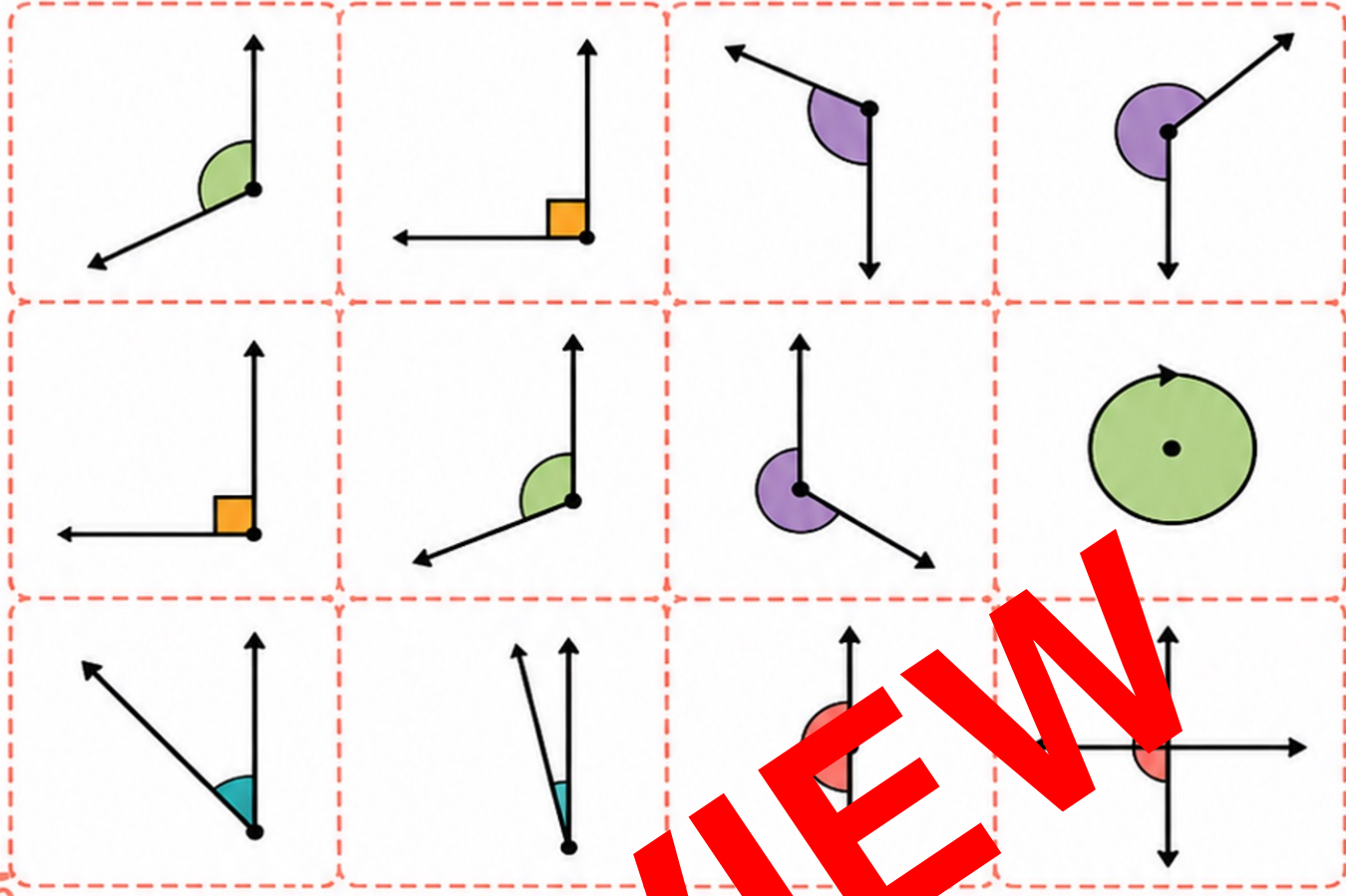
Right

Obtuse

Straight

Reflex

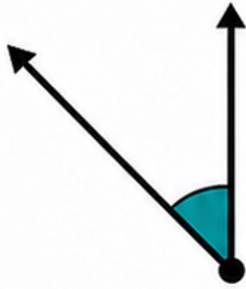
Full turn



I Have, Who Has? Angles

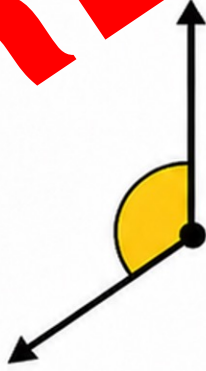


I have 45° .



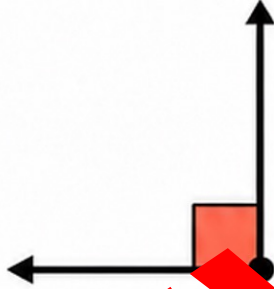
Who has 120° ?

I have 120° .



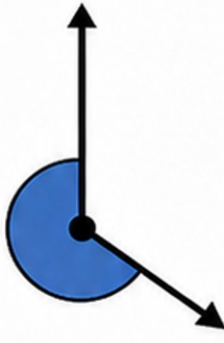
Who has 90° ?

I have 90° .



Who has 210° ?

I have 210° .



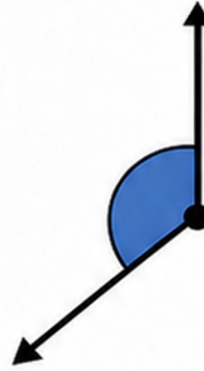
Who has 30° ?

I have 30° .



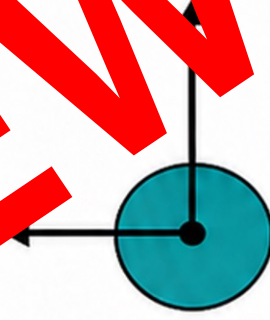
Who has 150° ?

I have 150° .



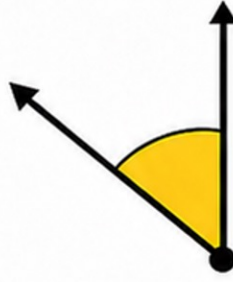
Who has 270° ?

I have 270° .



Who has 60° ?

I have 60° .

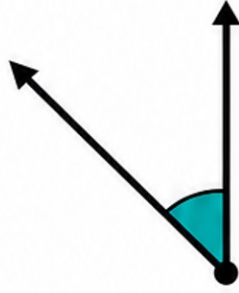


Who has 45° ?

Protractor Task Cards

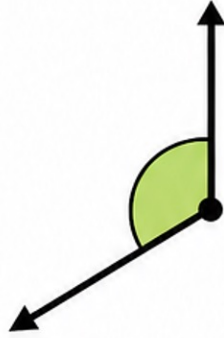
Measure each angle, then name it.

Card 1



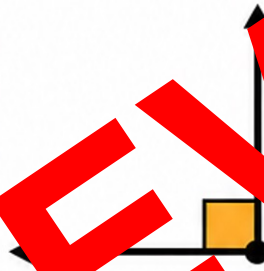
Measure: _____°

Card 2



Measure: _____°

Card 3



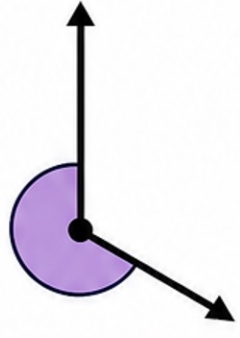
Measure: _____°

Card 4



Measure: _____°

Card 5



Measure: _____°

Card 6



Measure: _____°

Recording Sheet

Card

1

2

3

4

5

6

Angle size

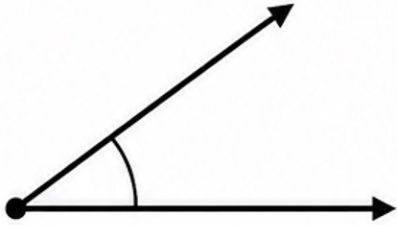
Angle name

Name: _____

Estimate and Name Angles

Estimate each angle size, then name the angle type.

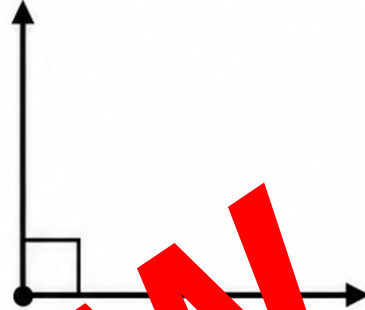
1



Estimate: _____°

Angle name: _____

2



Estimate: _____°

Angle name: _____

3



Estimate: _____°

Angle name: _____

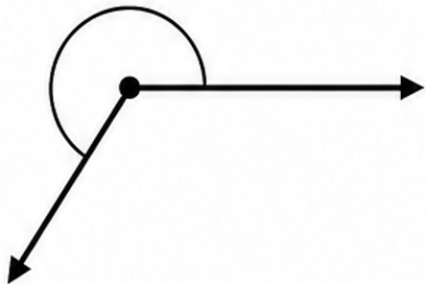
4



Estimate: _____°

Angle name: _____

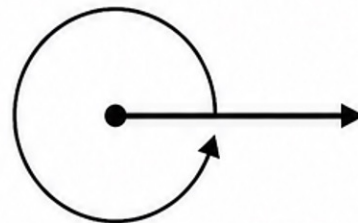
5



Estimate: _____°

Angle name: _____

6

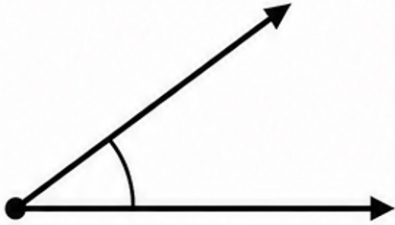


Estimate: _____°

Angle name: _____

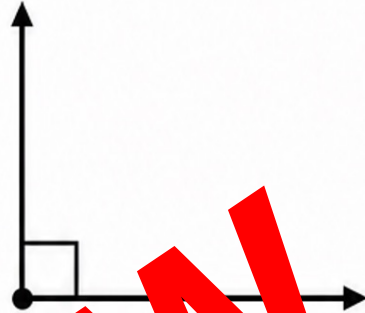
Estimate and Name Angles

Estimate each angle size, then name the angle type.

1

Estimate: 45°

Angle name: Acute

2

Estimate: 90°

Angle name: Right

3

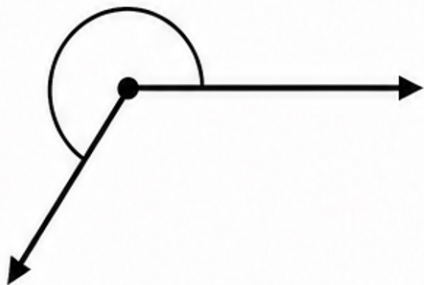
Estimate: 120°

Angle name: Obtuse

4

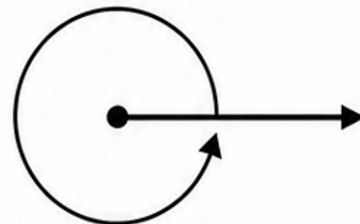
Estimate: 180°

Angle name: Straight

5

Estimate: 240°

Angle name: Reflex

6

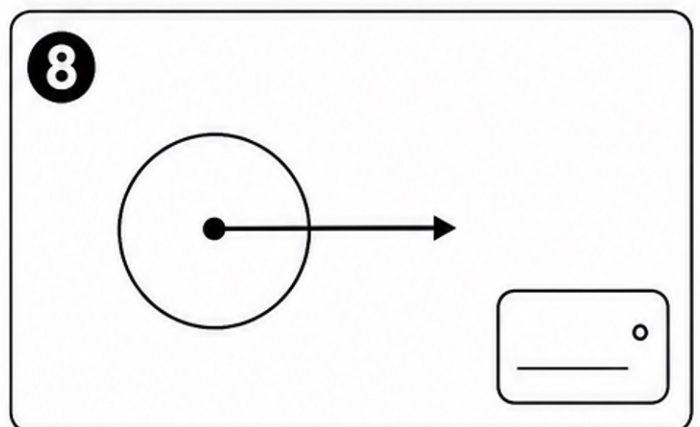
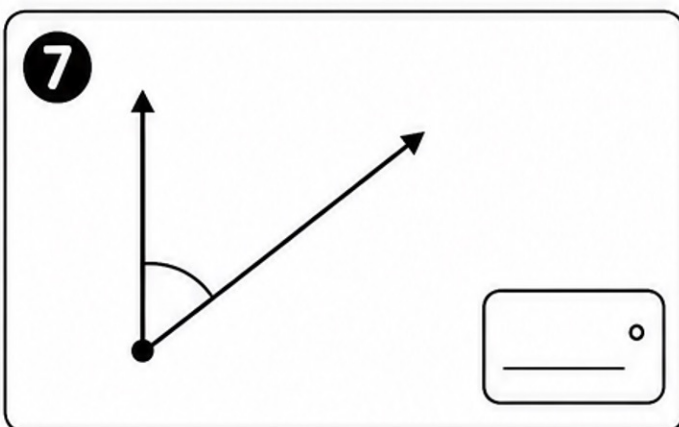
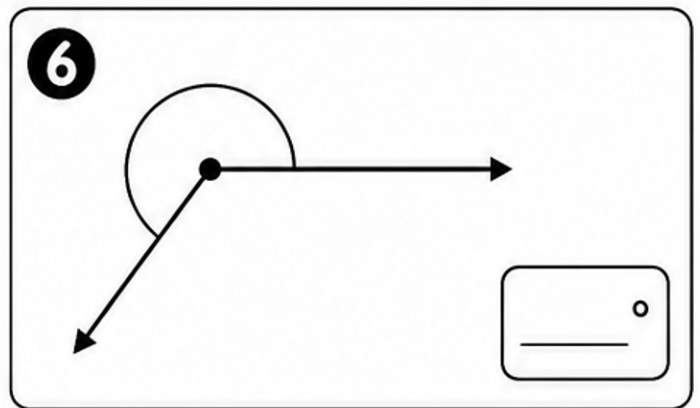
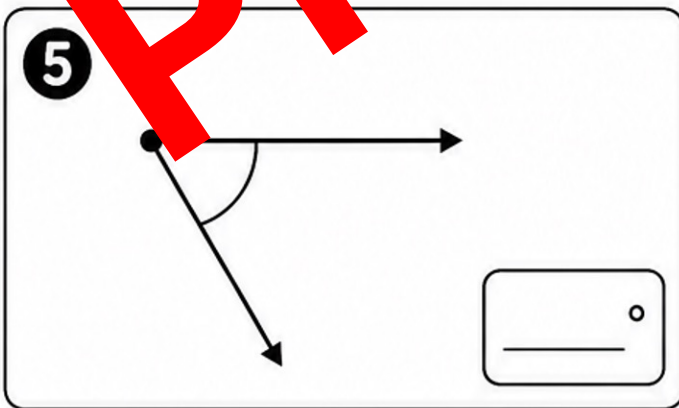
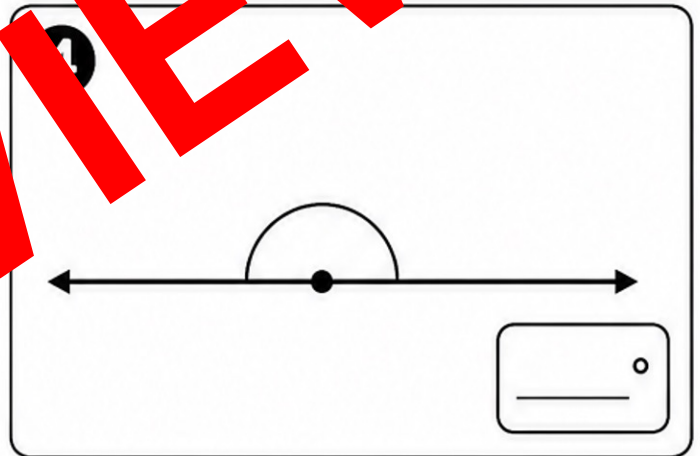
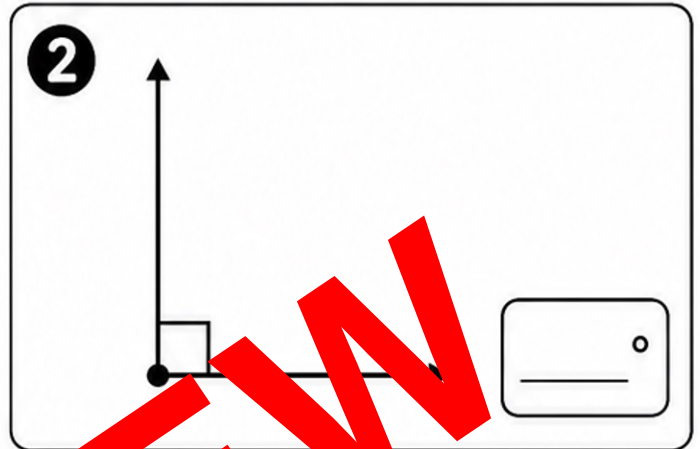
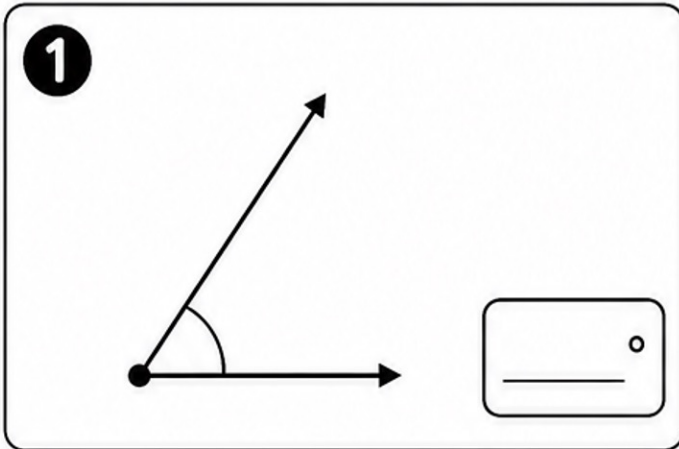
Estimate: 360°

Angle name: Full turn

Name: _____

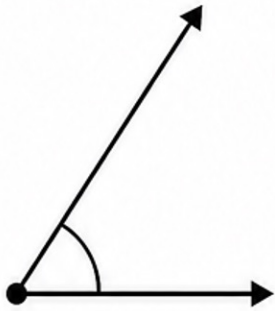
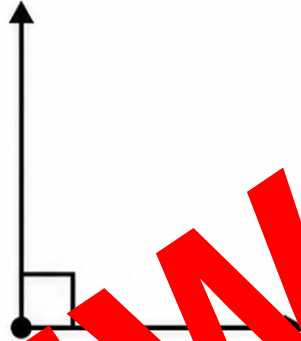
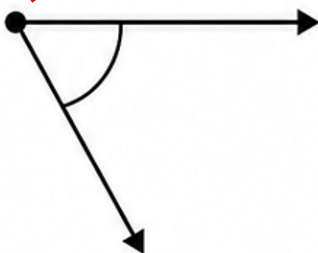
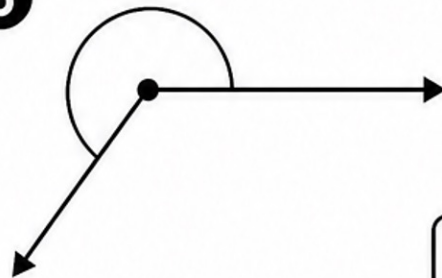
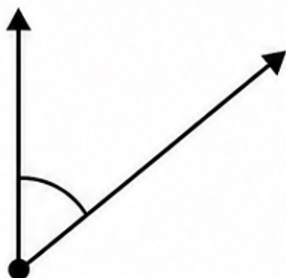
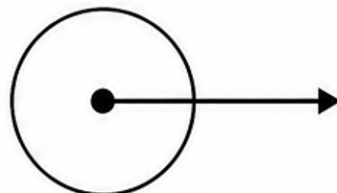
Measure Angles with a Protractor

Measure each angle. Write the size in degrees.



Measure Angles with a Protractor

Measure each angle. Write the size in degrees.

1**60°****2****90°****3****115°****4****180°****5****120°****6****240°****7****45°****8****360°**

Name: _____

Draw Angles

Use a protractor to draw each angle from the starting ray.

1. 35°



2. 90°



3. 125°



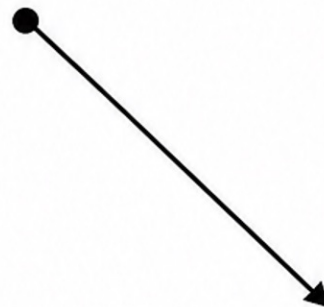
4. 180°



5. 240°



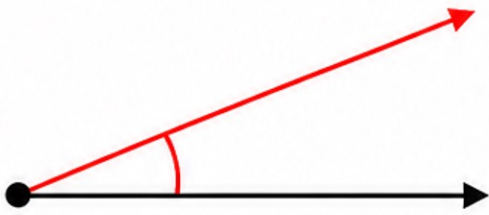
6. 315°



Draw Angles

Use a protractor to draw each angle from the starting ray.

1. 35°



2. 90°



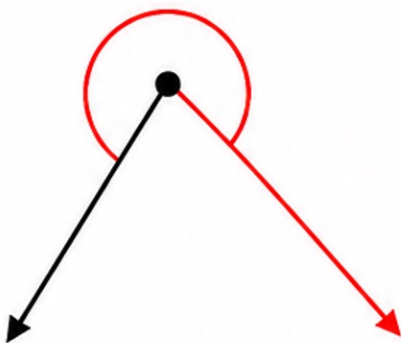
3. 125°



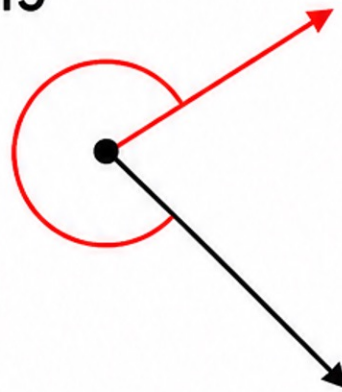
4. 180°



5. 240°



6. 315°



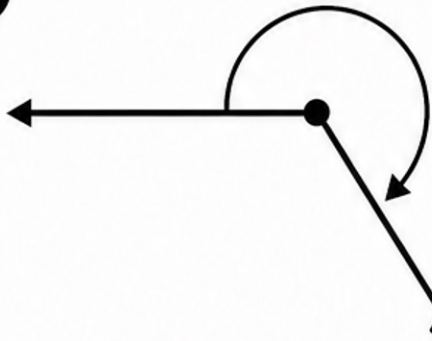
Name: _____

Reflex Angles

A reflex angle is greater than 180° and less than 360° .

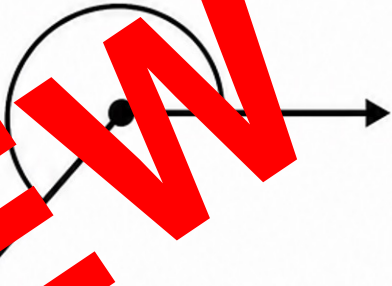
Find the reflex angle shown by the large turn.

1



Reflex angle: _____ $^\circ$

2



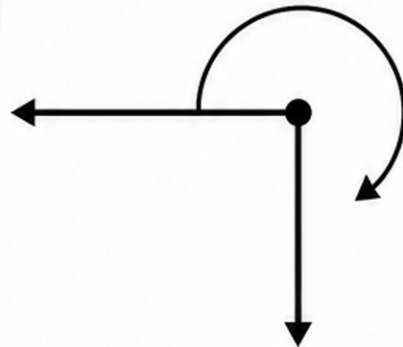
Reflex angle: _____ $^\circ$

3



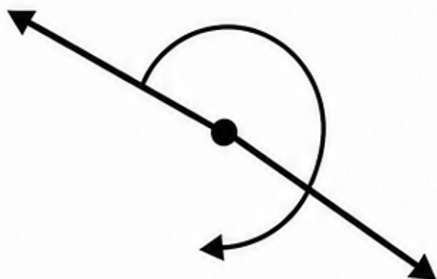
Reflex angle: _____ $^\circ$

4



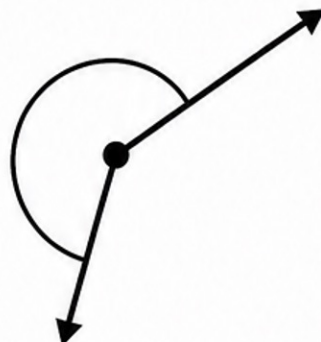
Reflex angle: _____ $^\circ$

5



Reflex angle: _____ $^\circ$

6

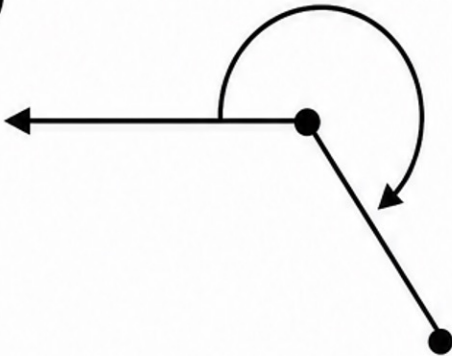


Reflex angle: _____ $^\circ$

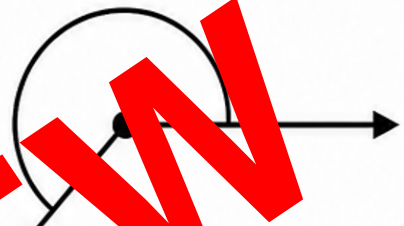
Reflex Angles

A reflex angle is greater than 180° and less than 360° .

Find the reflex angle shown by the large turn.

1

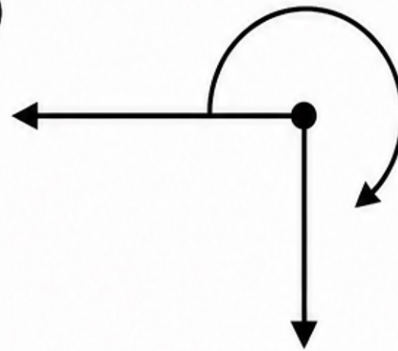
Reflex angle: 225°

2

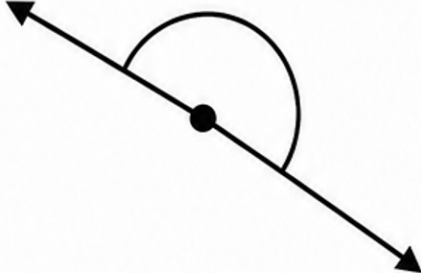
Reflex angle: 240°

3

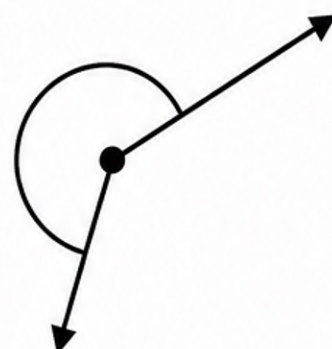
Reflex angle: 250°

4

Reflex angle: 270°

5

Reflex angle: 300°

6

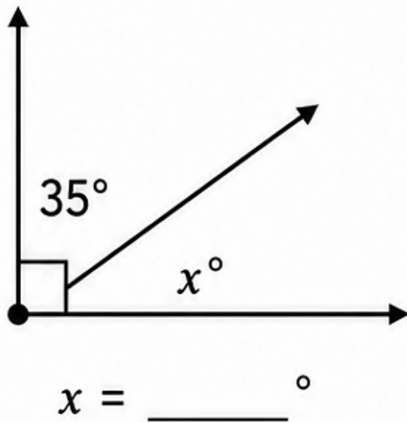
Reflex angle: 330°

Name: _____

Missing Angles

Use 90° and 180° facts to find each missing angle.

1



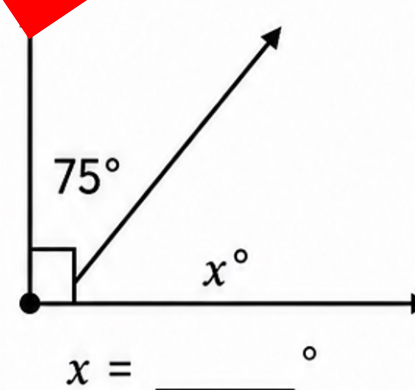
2



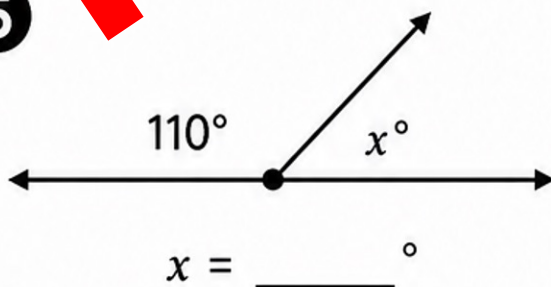
3



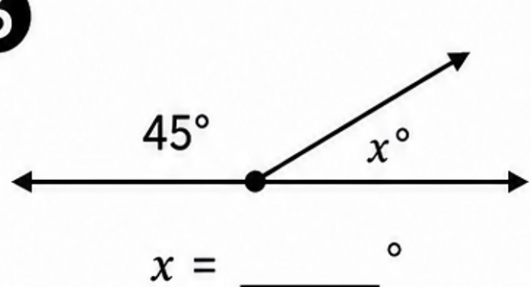
4



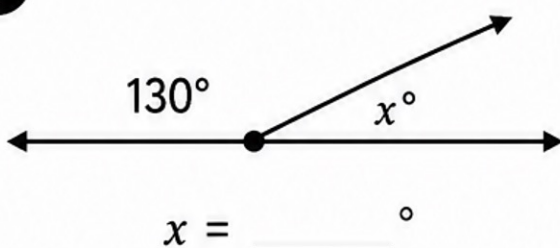
5



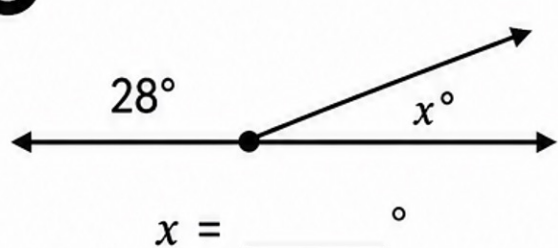
6



7

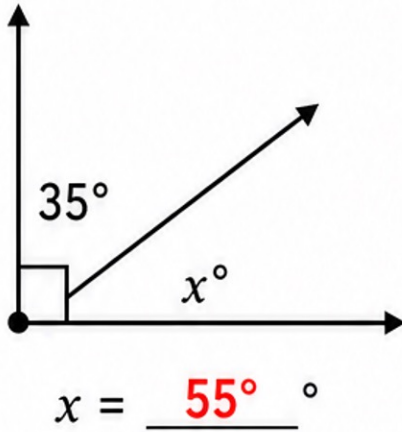
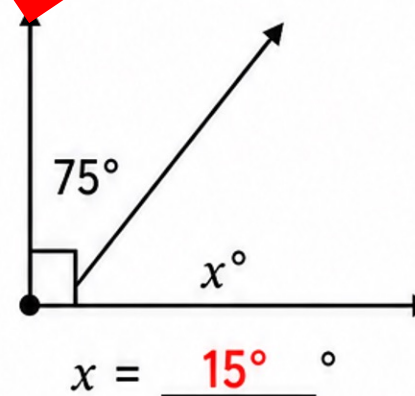
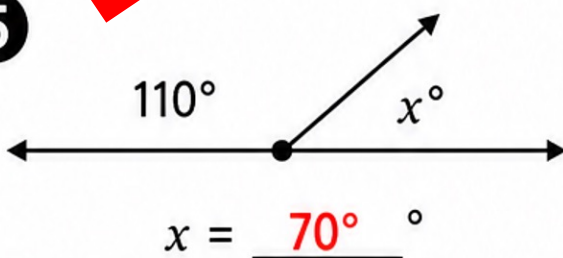
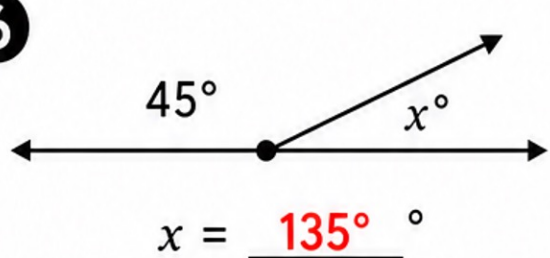
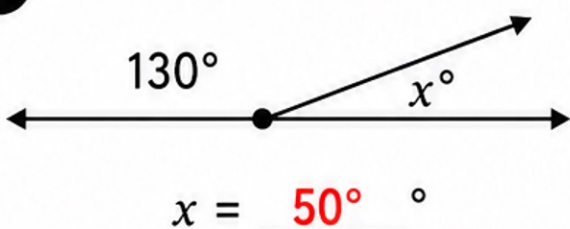
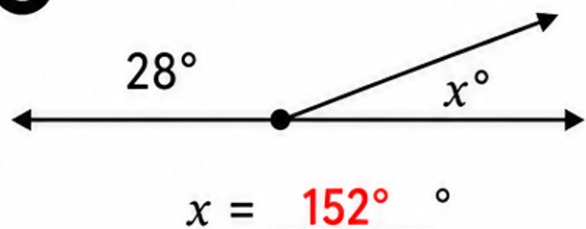


8



Missing Angles

Use 90° and 180° facts to find each missing angle.

1**2****3****4****5****6****7****8**

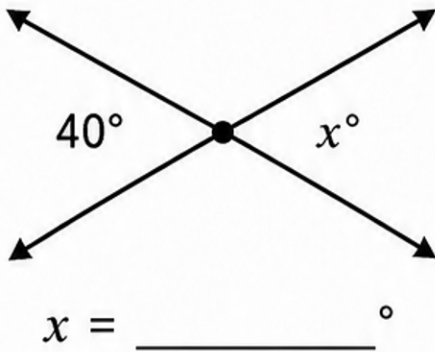
Name: _____

Vertically Opposite Angles

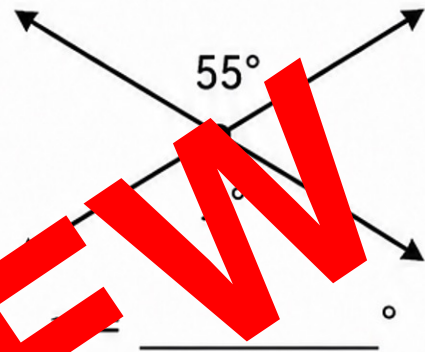
Vertically opposite angles are equal.

Use the matching opposite angle to find x .

1



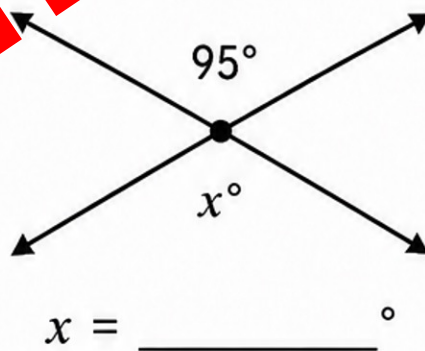
2



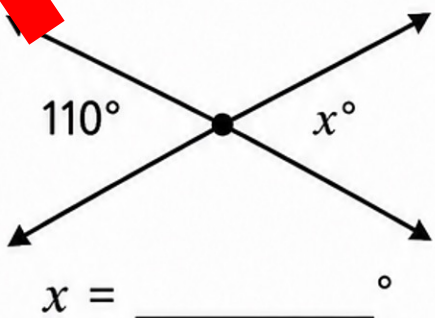
3



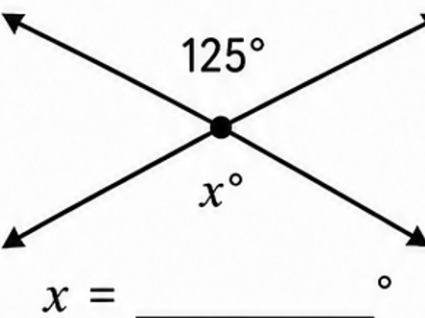
4



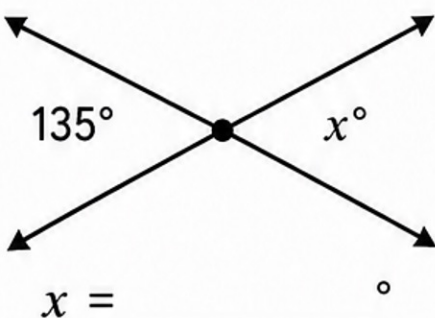
5



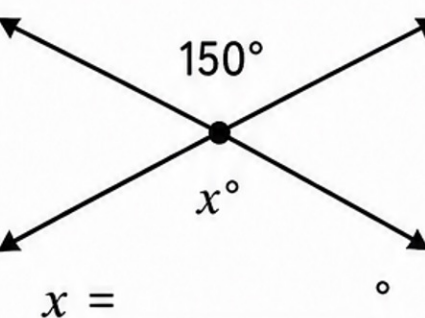
6



7



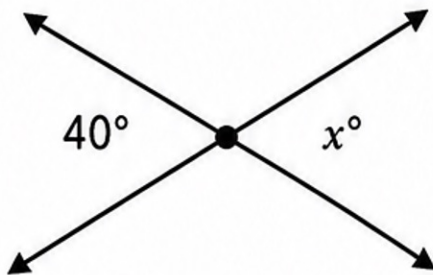
8



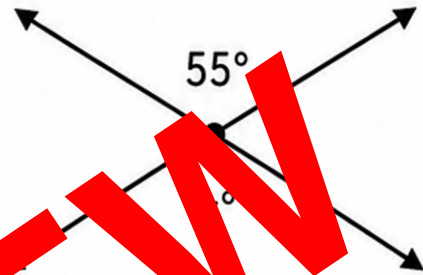
Vertically Opposite Angles

Vertically opposite angles are equal.

Use the matching opposite angle to find x .

1

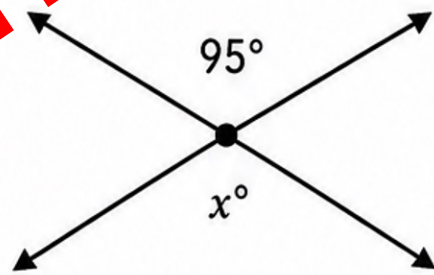
$$x = \underline{40^\circ}$$

2

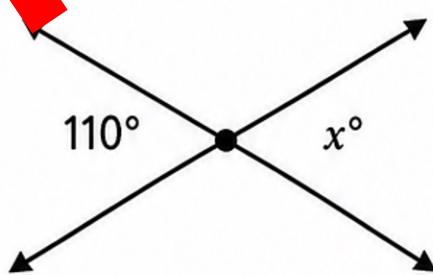
$$x = \underline{55^\circ}$$

3

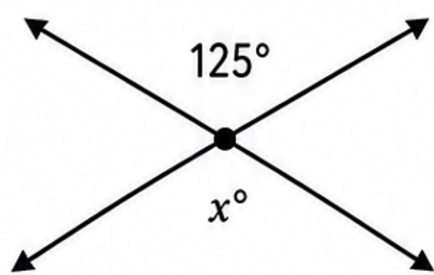
$$x = \underline{70^\circ}$$

4

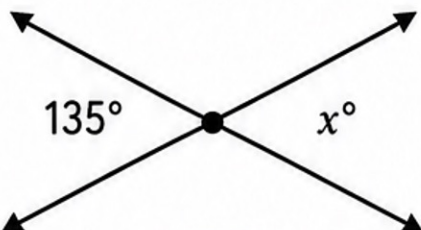
$$x = \underline{95^\circ}$$

5

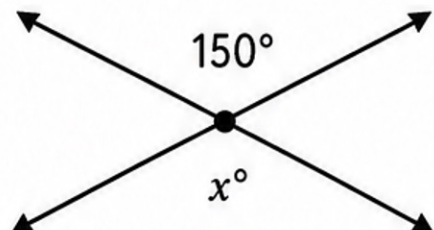
$$x = \underline{110^\circ}$$

6

$$x = \underline{125^\circ}$$

7

$$x = \underline{135^\circ}$$

8

$$x = \underline{150^\circ}$$

Name: _____

Angle Code Message

Solve each angle fact. Use the code to reveal the message.

30=K	45=E	60=P	90=M	110=A	125=S	135=U
150=R	180=I	240=N	270=G			

1 $90^\circ - 60^\circ$

Answer: _____[°] Letter: _____

2 $90^\circ - 45^\circ$

Answer: _____[°] Letter: _____

3 $180^\circ - 135^\circ$

Answer: _____[°] Letter: _____

4 $90^\circ - 30^\circ$

Answer: _____[°] Letter: _____

5 right angle

Answer: _____[°] Letter: _____

6 $180^\circ - 135^\circ$

Answer: _____[°] Letter: _____

7 $90^\circ - 70^\circ$

Answer: _____[°] Letter: _____

8 $180^\circ - 55^\circ$

Answer: _____[°] Letter: _____

9 $90^\circ + 45^\circ$

Answer: _____[°] Letter: _____

10 $180^\circ - 30^\circ$

Answer: _____[°] Letter: _____

11 straight angle

Answer: _____[°] Letter: _____

12 $180^\circ + 60^\circ$

Answer: _____[°] Letter: _____

13 $360^\circ - 90^\circ$

Answer: _____[°] Letter: _____

Message: _____

Angle Code Message

Solve each angle fact. Use the code to reveal the message.

30=K	45=E	60=P	90=M	110=A	125=S	135=U
150=R	180=I	240=N	270=G			

1. $90^\circ - 60^\circ$

Answer: 30° Letter: K

2. $90^\circ - 45^\circ$

Answer: 45° Letter: E

3. $180^\circ - 135^\circ$

Answer: 45° Letter: E

4. $180^\circ - 120^\circ$

Answer: 60° Letter: P

5. right angle

Answer: 90° Letter: M

6. $180^\circ - 135^\circ$

Answer: 45° Letter: E

7. $180^\circ - 70^\circ$

Answer: 110° Letter: A

8. $180^\circ - 55^\circ$

Answer: 125° Letter: S

9. $90^\circ + 45^\circ$

Answer: 135° Letter: U

10. $180^\circ - 30^\circ$

Answer: 150° Letter: R

11. straight angle

Answer: 180° Letter: I

12. $180^\circ + 60^\circ$

Answer: 240° Letter: N

13. $360^\circ - 90^\circ$

Answer: 270° Letter: G

Message: K E E P M E A S U R I N G

Name: _____

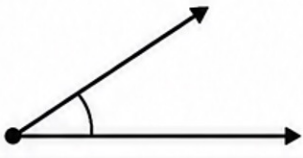
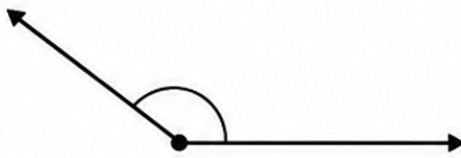
Date: _____

Angle Designer Challenge

Assessment

A. Measure and name

Measure each angle and name its type.

Angle	Size	Type
1. 		
2. 		
3. 		
4. 		

B. Draw

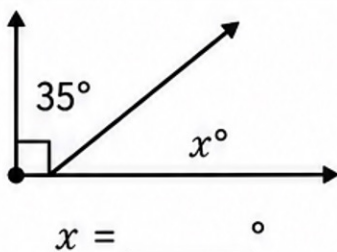
Draw each angle.

1. 45° 2. 120° 3. 240° 

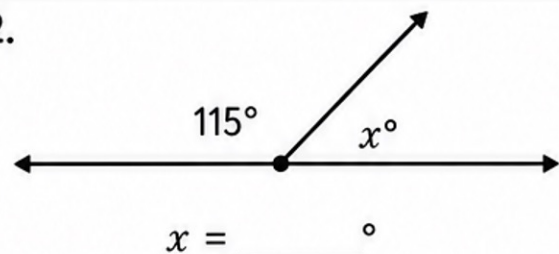
C. Reason

Find the missing angle.

1.



2.

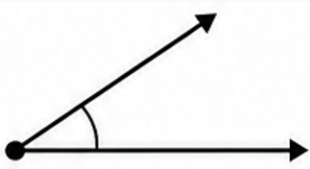
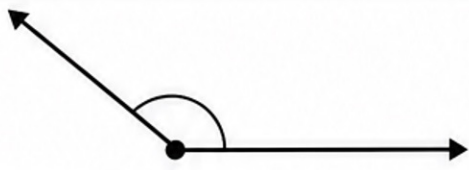


Angle Designer Challenge

Assessment

A. Measure and name

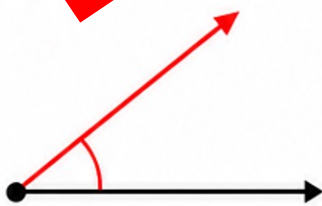
Measure each angle and name its type.

Angle	Size	Type
1. 	45°	Acute
2. 	135°	Obtuse
3. 	90°	Right
4. 	240°	Reflex

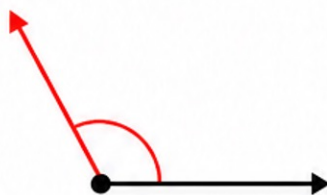
B. Draw

Draw each angle.

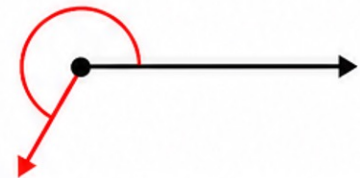
1. 45°



2. 120°



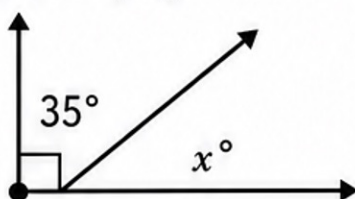
3. 240°



C. Reason

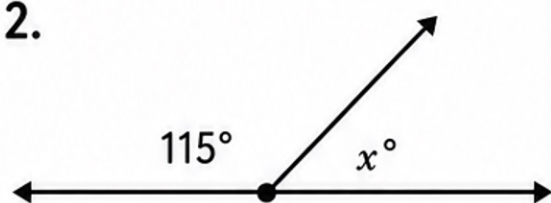
Find the missing angle.

1.



$$x = \underline{55^\circ}$$

2.



$$x = \underline{65^\circ}$$

≡ Angles Update Rubric ≡

CRITERIA	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
Names angle types	needs support	partial skill	meets Year 5 expectation	accurate and independent	flexible and precise
Measures and draws angles	needs support	partial skill	meets Year 5 expectation	accurate and independent	flexible and precise
Solves missing angles	needs support	partial skill	meets Year 5 expectation	accurate and independent	flexible and precise
Explains reasoning	needs support	partial skill	meets Year 5 expectation	accurate and independent	flexible and precise

Angles Update



Angles Measure Turns

An angle is made when two arms meet at a vertex.

We measure the amount of turn between the arms.

The unit for angle size is degrees.



The Parts of an Angle

Every angle has two arms, one vertex and an opening.

The opening shows the size of the turn.

A larger opening means a larger angle.



Benchmark Angles Help

A right angle is 90 degrees.

A straight angle is 180 degrees.

A full turn is 360 degrees.

Use these benchmarks before measuring.



Name the Angle Type

Acute angles are less than 90 degrees.

Obtuse angles are between 90 and 180 degrees.

Reflex angles are greater than 180 degrees and less than 360 degrees.



Estimate Before Measuring

Look at the angle first.

Compare it with 90 degrees and 180 degrees.

A sensible estimate helps you choose the correct protractor scale.



Place the Protractor Carefully

Put the centre mark on the vertex.

Line one arm up with zero degrees.

Read the scale where the other arm crosses.



Choose the Right Scale

Most protractors show two scales.

Start reading from the zero line that matches the baseline.

Check whether the answer fits the angle type.



Draw Angles from a Starting Ray

Draw one starting ray first.

Place the protractor on the vertex.

Mark the required degree measure and draw the second arm.



Reflex Angles Go Past a Straight Angle

A reflex angle is more than 180 degrees.

It is less than a full turn.

Sometimes it helps to subtract the smaller angle from 360 degrees.



Missing Angles Use Facts

Angles in a right angle add to 90 degrees.

Angles on a straight line add to 180 degrees.

Use subtraction to find the missing part.



Vertically Opposite Angles

Match

When two straight lines cross, vertically opposite angles are equal.

Find the matching opposite angle first.

Then check the nearby straight-line pairs.



Angles Are Everywhere

Maps, paths, sport, art and building plans all use angles.
Estimating, measuring and drawing angles helps us describe
direction and shape accurately.



Practise in Different Ways

Sort angle types.

Play angle-chain games.

Measure task cards.

Complete worksheets and explain your reasoning.



This Week

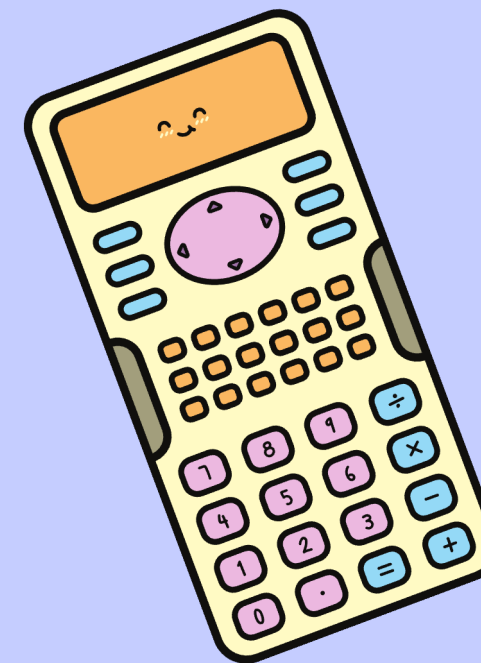
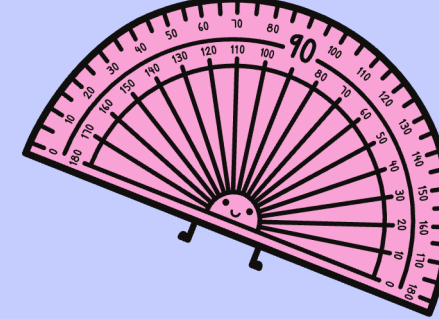
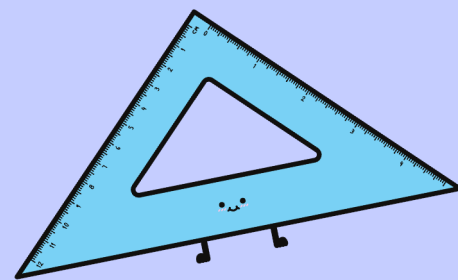
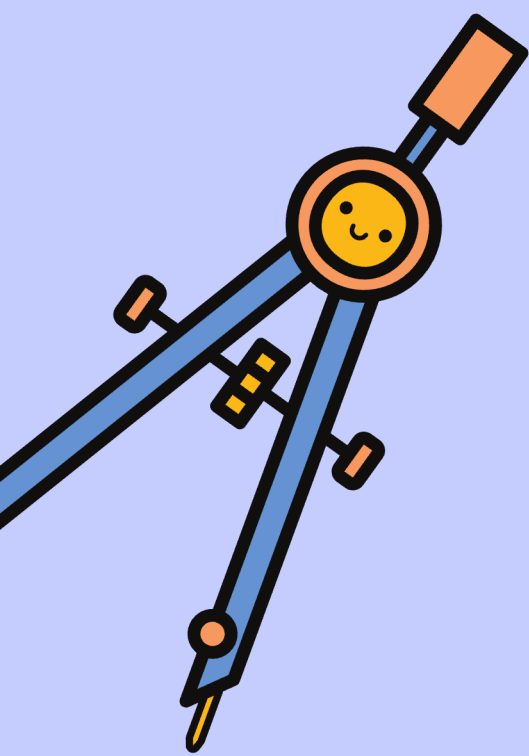
Estimate angles first.

Measure and draw with a protractor.

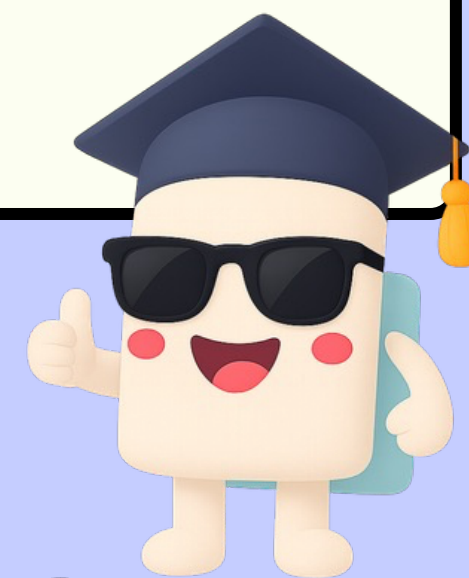
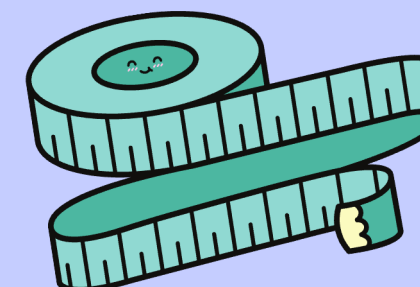
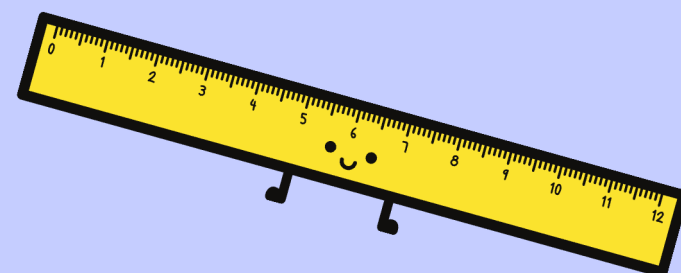
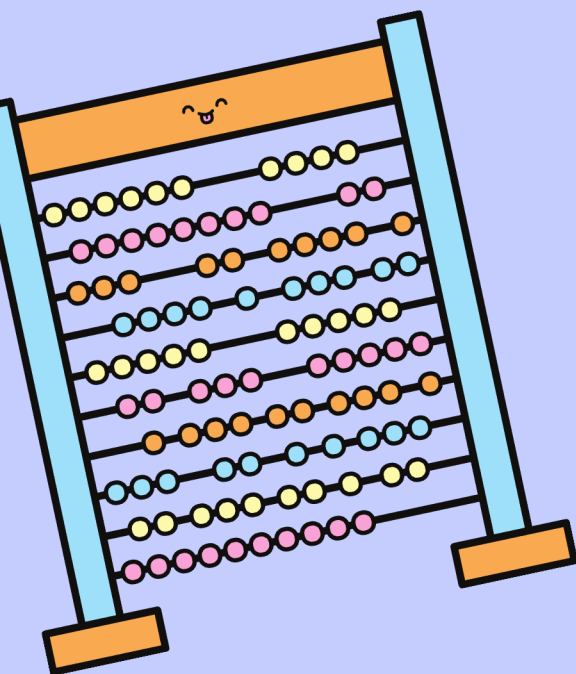
Solve missing and vertically opposite angles.

Show your understanding in the assessment.





Well Done!



Angles Update Quiz

PREVIEW



Question 1

Which angle is exactly 90 degrees?

- A. Acute
- B. Right
- C. Obtuse
- D. Reflex



Answer 1

PREVIEW

B. Right



Question 2

True or false?

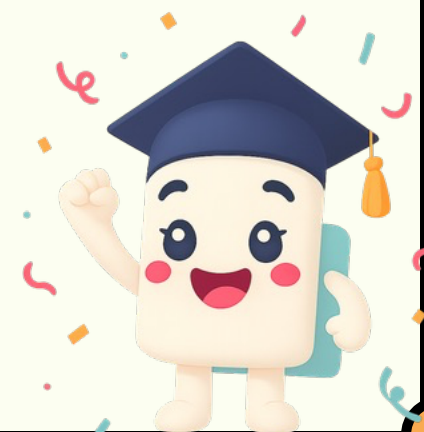
An acute angle is less than 90 degrees.



Answer 2

PREVIEW

True.



Question 3

A straight angle is how many degrees?



Answer 3

PREVIEW

180 degrees.



Question 4

Which angle type is greater than 180 degrees and less than 360 degrees?

- A. Acute
- B. Right
- C. Reflex
- D. Straight



Answer 11

PREVIEW

c. Reflex



Question 5

True or false?

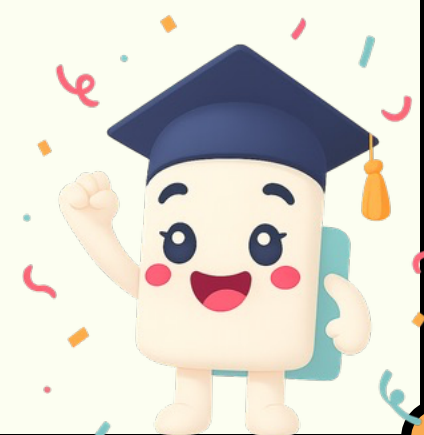
Angles on a straight line add to 90 degrees.



Answer 5

PREVIEW

False. They add to 180 degrees.



Question 6

Find the missing angle.

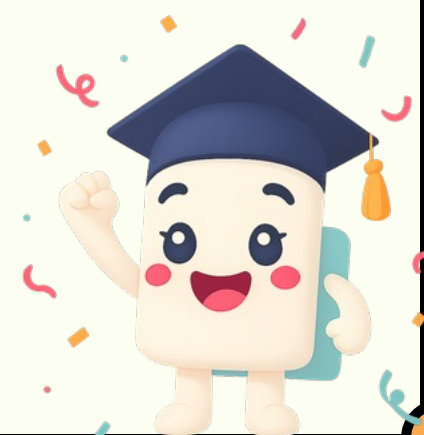
$$50 \text{ degrees} - 35 \text{ degrees} = ?$$



Answer 6

PREVIEW

55 degrees.



Question 7

Which tool is used to measure angles?

A. Ruler

B. Protractor

C. Compass

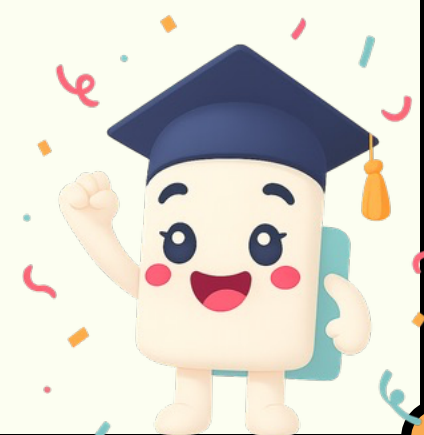
D. Calculator



Answer 7

PREVIEW

Protractor



Question 8

True or false?

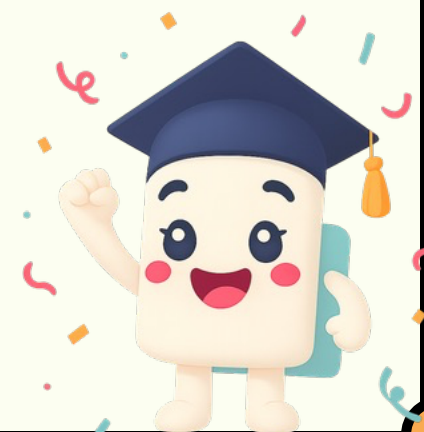
Vertically opposite angles are equal.



Answer 8

PREVIEW

True.



Question 9

What is the reflex angle if the smaller angle is 120 degrees?



Answer d

240 degrees because $360 - 120 = 240$.



Question 10

A line is split into 115 degrees and x degrees. What is x ?

A. 45 degrees

B. 55 degrees

C. 65 degrees

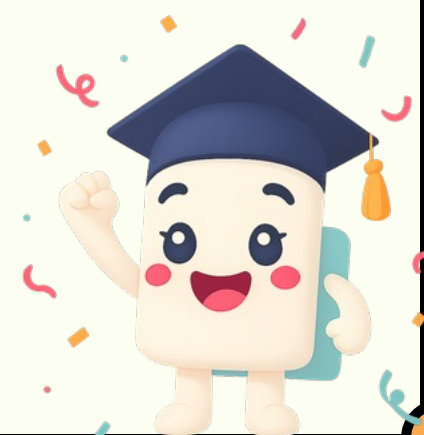
D. 75 degrees

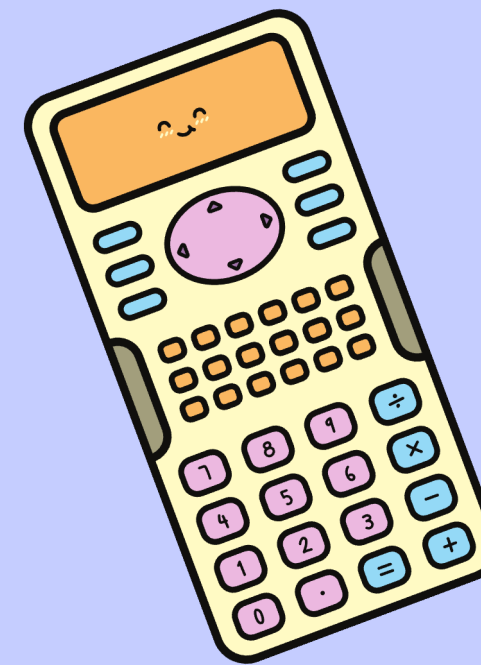
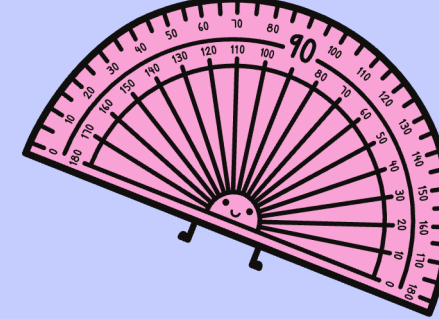
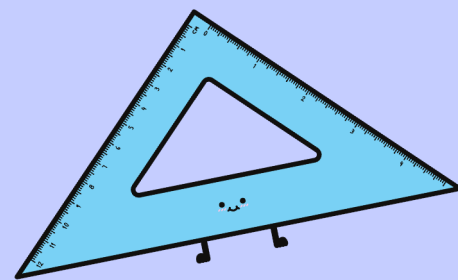
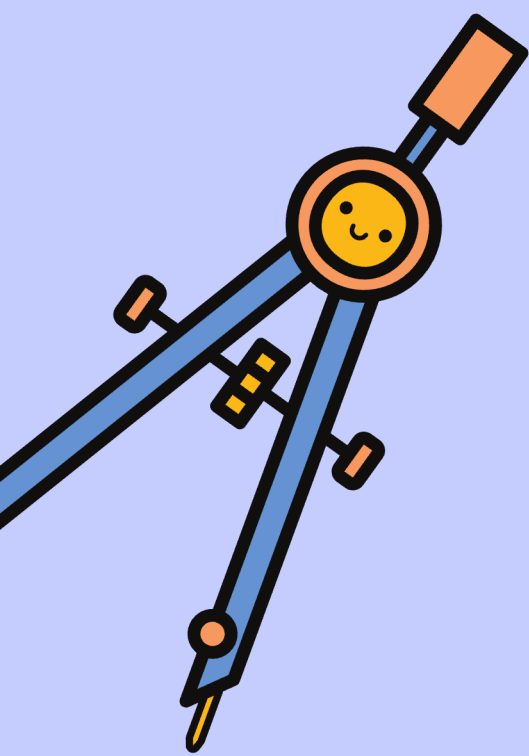


Answer 10

PREVIEW

degrees.





PREVIEW
Great Work!

